# **MADROÑO**

# A WEST AMERICAN JOURNAL OF BOTANY

## VOLUME XXXIV 1987

#### **BOARD OF EDITORS**

### Class of:

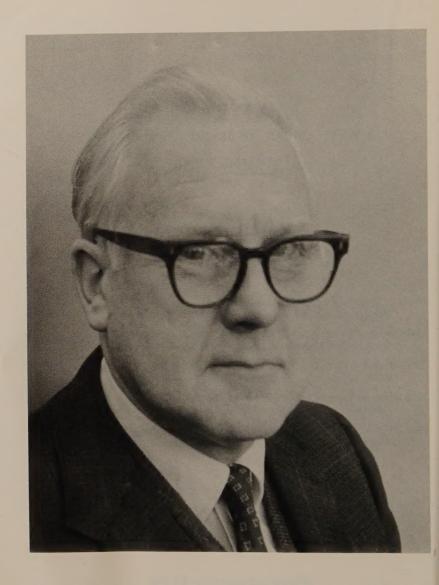
- 1987—J. RZEDOWSKI, Instituto de Ecologia, A.C., Mexico Dorothy Douglas, Boise State University, Boise, ID
- 1988—Susan G. Conard, USDA Forest Service, Riverside, CA WILLIAM B. CRITCHFIELD, USDA Forest Service, Berkeley, CA
- 1989—Frank Vasek, University of California, Riverside Barbara Ertter, University of California, Berkeley
- 1990—Steven Timbrook, Ganna Walska Lotusland Foundation, Montecito, CA Thomas R. Van Devender, Arizona–Sonora Desert Museum, Tucson
- 1991—DAVID J. KEIL, California Polytechnic State University, San Luis Obispo JAMES HENRICKSON, California State University, Los Angeles

Editor-WAYNE R. FERREN JR.

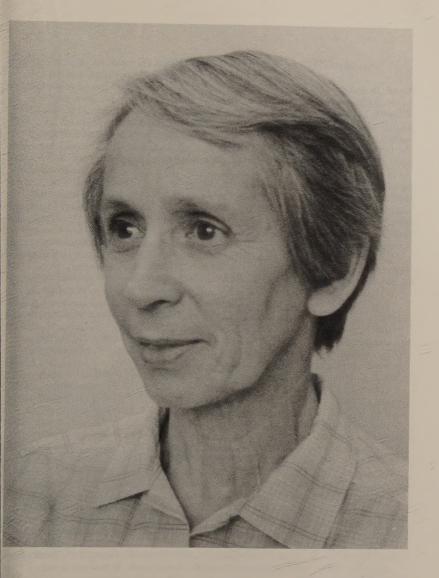
Associate Editor—Barry D. Tanowitz
Department of Biological Sciences
University of California, Santa Barbara, CA 93106

Published quarterly by the
California Botanical Society, Inc.
Life Sciences Building, University of California, Berkeley 94720

Printed by Allen Press, Inc., Lawrence, KS 66044



Few botanists have had a more profound impact on the fields of plant reproductive biology and evolutionary ecology than Herbert and Irene Baker. For almost half a century, they have pioneered the study of plant reproductive systems, with major contributions ranging from Herbert's classical early work on the evolutionary importance of variation in plant breeding systems to Herbert and Irene's definitive recent work on the ecological significance of pollen, nectar, and fruit chemistry. In addition, Herbert has contributed many seminal ideas toward understanding the evolutionary ecology of colonizing species and weedy species. Yet, in many ways, the most



enduring impact that Herbert and Irene have had is on the many students, colleagues, and friends who have taken their legendary ecology courses at the University of California, accompanied them on field trips in California, Costa Rica, and elsewhere, or attended the stimulating and pun-filled evening meetings at their home in the Berkeley hills. Their contagious enthusiasm, quick wit, and unlimited interest in sharing insights about plant ecology and evolutionary biology have served as a continual source of inspiration. In return, it is with fondest affection that we dedicate this volume of Madroño to them.

## TABLE OF CONTENTS

AIKEN, SUSAN G. (see Argus, George W. and Susan G. AIKEN)
ALLEN, LINDA (see Curto, Michael et al.)
ALMEDA, FRANK, Message from the past CBS president 383
Argus, George W., Noteworthy collection of Salix geyeriana 268
ARGUS, GEORGE W. and SUSAN G. AIKEN, Noteworthy collection of Festuca minutiflora 269
ARGUS, GEORGE W. and T. C. Brayshaw, Noteworthy collection of Salix tweedyi 268
Ayala, Richard (see Bullock, Stephen H. et al.)
BAKER, HERBERT G. (see BULLOCK, STEPHEN H. et al.)
BAKER, IRENE (see BULLOCK, STEPHEN H. et al.)
BISWELL, HAROLD H. (see Evans, Raymond A. et al.)
Bowers, Janice E. (see McLaughlin, Steven P. et al.)
Bowman, Robert N., Clarkia concinna subsp. automixa (Onagraceae), a new
subspecies from the South Bay region, central California4
Brayshaw, T. C. (see Argus, George W. and T. C. Brayshaw)
Breedlove, Dennis F., Review of Flora Fanerogamica del Valle de Mexico.
Volumen II. Dicotyledonae (Euphorbiaceae-Compositae (by Jerzy Rze-
dowski and Graciela C. de Rzedowski)270
BROYLES, PAULEEN, A flora of Vina Plains Preserve, Tehama County, California
BULLOCK, STEPHEN H., RICHARD AYALA, IRENE BAKER, and HERBERT G. BAKER,
Reproductive biology of the tree <i>Ipomoea wolcottiana</i> (Convolvulaceae)
BUSH, J. K. and O. W. VAN AUKEN, Some demographic and allometric char-
acteristics of Acacia smallii (Mimosaceae) in successional communities 250
CARTER, ANNETTA, Review of Xántus, The Letters of John Xántus to Spencer
Fullerton Baird from San Francisco and Cabo San Lucas, 1854–1861 (by
Ann H. Zwinger)
CONSTANCE, LINCOLN, Review of Marcus E. Jones: Pioneer western geologist,
mining engineer & botanist (by Lee W. Lenz)
CORNETT, JAMES W., Cold tolerance in the desert fan palm, Washingtonia filifera
(Arecaceae)5
CUMMINGS, ROBERT, Review of Poisonous plants of California (by Thomas C.
Fuller and Elizabeth McClintock)
CURTO, MICHAEL, LINDA ALLEN, and GEOFFREY LEVIN, Noteworthy collection
of Festuca occidentalis170
DAY, MAGGIE, Review of <i>Botanical illustration: Preparation for publication</i> (by Noel H. Holmgren and Bobbie Angell)
EVANS, RAYMOND A., HAROLD H. BISWELL, and DEBRA E. PALMQUIST, Seed
dispersal in Ceanothus cuneatus and C. leucodermis in a Sierran oak-
woodland savanna28
EWAN, JOSEPH, Roots of the California Botanical Society
FERNANDEZ, CARMEN F., LOWELL E. URBATSCH, and GENE SULLIVAN, Alloi-
spermum insuetum (Asteraceae: Heliantheae), a new species from Colombia16
Ferren, W. R., Jr., Editor's report for volume 34
FIEDLER, PEGGY LEE and ROBERT A. LEIDY, Plant communities of Ring Moun-
tain Preserve, Marin County, California
GE-LIN, CHU (see STUTZ, HOWARD C. et al.)
HALL, KENNETH R. F. (see McLaughlin, Steven P. et al.)
HALVORSON, WILLIAM L. and RICHARD E. KOSKE, Mycorrhizae associated with
an invasion of Erechtites glomerata (Asteraceae) on San Miguel Island,
California26

Helms, John A., Invasion of <i>Pinus contorta</i> var. <i>murrayana</i> (Pinaceae) into mountain meadows at Yosemite National Park, California	91
of <i>Pinus contorta</i> var. <i>murrayana</i> (Pinaceae) in mountain meadows of Yosemite National Park, California ————————————————————————————————————	77
fornia: vanishing relict or recent invader  HUFFORD, LARRY D., Inflorescence architecture of Eucnide (Loasaceae)	324 18
KEELEY, JON E., Fruit production patterns in the chaparral shrub Ceanothus crassifolius	273
KEELEY, JON E. and STERLING C. KEELEY, Role of fire in the germination of chaparral herbs and suffrutescents	240
Keeley, Sterling C. (see Keeley, Jon E. and Sterling C. Keeley)  Keil, David J., Melissa A. Luckow, and Donald J. Pinkava, <i>Cymophora</i> (Asteraceae: Heliantheae) returned to <i>Tridax</i>	354
KELLEY, WALTER A. (see SWANSON, JOHN R.) KNIGHT, WALTER, Review of Vascular plants of Upper Bidwell Park, Chico,	
CA (by Vernon H. Oswald)  KNIGHT, WALTER, Review of A flora of Dry Lakes Ridge, Ventura County,	169
California (by David L. Magney)	271
LAJTHA, KATE, JOHN WEISHAMPEL, and WILLIAM H. SCHLESINGER, Phosphorus and pH tolerances in the germination of the desert shrub <i>Larrea tridentata</i>	40
(Zygophyllaceae)	63
LEIDY, ROBERT A. (see FIEDLER, PEGGY LEE and ROBERT A. LEIDY) LENIHAN, JAMES M. (see SUGIHARA, NEIL G. et al.)	
Levin, Geoffrey A., Noteworthy collections of Astragalus hypoxylus and Mim- ulus congdonii	170
Levin, Geoffrey A. (see Curto, Michael et al.) Levin, Geoffrey A. (see Zedler, Paul H. et al.) Liston, Aaron, Noteworthy collection of <i>Peteria thompsonae</i>	381
Luckow, Melissa A. (see Keil, David J. et al.)  Magney, David L., The range and two new locations of Boschniakia strobilacea	
(Orobanchaceae)	379
Neese)  MARRS-SMITH, GAYLE and JAN NACHLINGER, Noteworthy collections of Astragalus gilmanii, Erigeron ovinus, and Polygala subspinosa var. hetero-	172
rhyncha	382
McLaughlin, Steven P., Janice E. Bowers, and Kenneth R. F. Hall, Vas-	359
McNeal, Dale W., Allium shevockii (Alliaceae), a new species from the crest	150
MINNICH, RICHARD A., The distribution of forest trees in northern Baja California, Mexico  MOORING, JOHN, Range extension, chromosome count, and mephitism in Les-	98
Mooring, John, Range extension, chromosome count, and mephrusin in Lessingia tenuis (Compositae)  Moran, Virginia (see Zedler, Paul H. et al.)	168
Nachlinger, Jan (see Marrs-Smith, Gayle and Jan Nachlinger) Nakal, Kei M., Some new and reconsidered California <i>Dudleya</i> (Crassulaceae)	
NORMAN, ELAINE M. and JONAS E. LAWESSON, Noteworthy collection of Bud-	334
dleja americana	381

PALMQUIST, DEBRA E. (see EVANS, RAYMOND A. et al.)
PARFITT, BRUCE D., Noteworthy collection of Lygodesmia grandiflora
PARKER, KATHLEEN C., Seedcrop characteristics and minimum reproductive
size of organ pipe cactus (Stenocereus thurberi) in southern Arizona
PINKAVA, DONALD J. (see KEIL, DAVID J. et al.)
RATLIFF, RAYMOND D. (see Helms, John A. and Raymond D. RATLIFF)
RAY, MARTIN F., Soliva (Asteraceae: Anthemideae) in California
REED, LOIS J. (see SUGIHARA, NEIL G. et al.)
RILLING, TRUDY (see ZEDLER, PAUL H. et al.)
SANDERSON, STEWART C. (see STUTZ, HOWARD C. et al.)
Schlesinger, William H. (see Lajtha, Kate et al.)
Showers, Mary Ann T., A systematic study of Silene suksdorfii, S. grayi, and S. sargentii (Caryophyllaceae)
SMITH, CLIFTON, Review of Flora of the Santa Monica Mountains, California
(by Peter H. Raven, Henry J. Thompson, and Barry A. Prigge)
SPIRA, TIMOTHY P., Alpine annual plant species in the White Mountains of eastern California
STUART, JOHN D., Fire history of an old-growth forest of Sequoia sempervirens
(Taxodiaceae) forest in Humboldt Redwoods State Park, California
STUTZ, HOWARD C., STEWART C. SANDERSON, E. DURANT MCARTHUR, and
CHU GE-LIN, Chomosome races of Grayia brandegei (Chenopodiaceae)
SUGIHARA, NEIL G., LOIS J. REED, and JAMES M. LENIHAN, Vegetation of the
bald hills oak woodlands, Redwood National Park, California
Sullivan, Gene (see Fernandez, Carmen F. et al.)
Swanson, John R. and Walter A. Kelley, <i>Claytonia palustris</i> (Portulacaceae), a new species from California
Todson, Thomas K., Noteworthy collection of Penstemon ramosus
TURNER, B. L., A new species of <i>Axiniphyllum</i> (Asteraceae: Heliantheae) from Durango, Mexico
URBATSCH, LOWELL E. (see FERNANDEZ, CARMEN F. et al.)
VAN AUKEN, O. W. (see Bush, J. K. and O. W. VAN AUKEN)
WEBER, WILLIAM A., Noteworthy collection of Byrum blindii
Weishample, John (see Lajtha, Kate et al.)
WHITTEMORE, ALAN T., Noteworthy collections of Athalamia hyalina, Cam-
pylium halleri, Entodon schleicheri, Manni fragrans, Mylia anomala,
Preissia quadrata, Riccia albida, and Timmia megapolitana subsp. bavarica
ZEDLER, PAUL H., VIRGINIA MORAN, TRUDY RILLING, and GEOFFREY A. LEVIN,
Noteworthy collections of Agrastic avenageae and Sarihnaria halandari

## NEW PAGE CHARGES FOR MADROÑO AUTHORS

The Executive Council of the California Botanical Society has initiated a new policy for page charges. Starting with papers received by the editor after 31 Dec 1987, each author will receive five free pages per volume of *Madroño*. The decrease from 20 free pages every two volumes is necessary because of the escalating costs of publication. We wish to maintain the size and quality of issues, and this will be possible only with greater financial commitment from authors. We greatly appreciate the many papers contributed to *Madroño* and look forward to serving the membership and botanical community with quality volumes in the future.

DATES OF PUBLICATION OF MADROÑO, VOLUME 34

Number 1, pages 1–76, published 31 March 1987 Number 2, pages 77–172, published 30 June 1987 Number 3, pages 173–272, published 30 September 1987

Number 4, pages 272–392, published 20 January 1988

#### **ANNOUNCEMENT**

#### MADROÑO BACK ISSUES AVAILABLE

Does your favorite institution contain a complete set of *Madroño*? If not, now is the time to inform your periodical manager to acquire back issues to complete the institution's holdings. Both institutional and individual orders are accepted.

To order, provide desired volume and issue numbers to:

James R. Shevock, Corresponding Secretary % Department of Botany California Academy of Sciences San Francisco, CA 94118

The California Botanical Society pays all handling and shipping charges. Purchase orders welcomed. All orders placed will be filled in 2 weeks upon receipt.

Some individual issues are in short supply. Don't delay, order your back issues now!

#### Madroño Inventory, Fall 1987

Vol.		No. of		Cost per issue		Cost per vol.	
no.	Dates	issues	Availability	Inst.	Ind.	Inst.	Ind.
1	1916-29	17	Complete	\$3.00	\$1.50	\$51.00	\$25.50
2	1930-34	17	Complete	\$3.00	\$1.50	\$51.00	\$25.50
3	1935-36	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
4	1937-38	- 8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
5	1939-40	8	#5, 7 out of print	\$5.00	\$3.00		
6	1941-42	8	#1, 3, 6 out of print	\$5.00	\$3.00		
7	1943-44	8	#1, out of print	\$5.00	\$3.00		
8	1945-46	8	#1, 7, 8 out of print	\$5.00	\$3.00		
9	1947-48	8	#2, 4, 5, 7 out of print	\$5.00	\$3.00		
10	1949-50	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
11	1951–52	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
12	1953-54	- 8	#1, 3 out of print	\$5.00	\$3.00		
13	1955–56	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
14	1957–58	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
15	1959–60	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
16	1961–62	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
17	1963-64	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
18	1965–66	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
19	1967–68	8	#6 out of print	\$5.00	\$3.00		
20	1969–70	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
21	1971–72	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
22	1973–74	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
23	1975–76	8	Complete	\$5.00	\$3.00	\$40.00	\$24.00
24	1977	4	#1 out of print	\$6.00	\$4.00		
25	1978	4	Complete	\$7.00	\$5.00	\$28.00	\$20.00
26	1979	4	Complete	\$7.00	\$5.00	\$28.00	\$20.00
27	1980	4	Complete	\$7.00	\$5.00	\$28.00	\$20.00
28	1981	4	Complete	\$7.00	\$5.00	\$28.00	\$20.00
29	1982	-4	Complete	\$7.00	\$5.00	\$28.00	\$20.00
30	1983	4	Complete	\$7.00	\$5.00	\$28.00	\$20.00
31	1984	4	Complete	\$7.00	\$5.00	\$28.00	\$20.00
32	1985	4	Complete	\$7.00	\$5.00	\$28.00	\$20.00